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Abstract

The Wide-field Infrared Survey Explorer (WISE; Wright et al. 2010) surveyed the entire sky at 3.4, 4.6, 12 and 22 microns in 2010, achieving 5-sigma point source sensitivities per band better than 0.08, 0.11, 1 and 6 mJy in unconfused regions on the ecliptic. The WISE All-Sky Data Release, conducted on March 14, 2012, incorporates all data taken during the full cryogenic mission phase, 7 January 2010 to 6 August 2010, that were processed with improved calibrations and reduction algorithms. Release data products include: (1) an Atlas of 18,240 match-filtered, calibrated and coadded image sets; (2) a Source Catalog containing positions and four-band photometry for over 563 million objects, and (3) an Explanatory Supplement. Ancillary products include a Reject Table that contains 284 million detections that were not selected for the Source Catalog because they are low signal-to-noise ratio or spurious detections of image artifacts, an archive of over 1.5 million sets of calibrated WISE Single-exposure images, and a database of 9.4 billion source extractions from those single-images, and moving object tracklets identified by the NEOWISE program (Mainzer et al. 2011). The WISE All-Sky Data Release products supersede those from the WISE Preliminary Data Release (Cutri et al. 2011).

The Explanatory Supplement to the WISE All-Sky Data Release Products is a general guide for users of the WISE data. The Supplement contains an overview of the WISE mission, facilities, and operations, a detailed description of WISE data processing algorithms, a guide to the content and formats of the image and tabular data products, and cautionary notes that describe known limitations of the All-Sky Release products. Instructions for accessing the WISE data products via the services of the NASA/IPAC Infrared Science Archive are provided. The Supplement also provides analyses of the achieved sky coverage, photometric and astrometric characteristics and completeness and reliability of the All-Sky Release data products.

The WISE All-Sky Release Explanatory Supplement is an on-line document that is updated frequently to provide the most current information for users of the WISE data products. The Explanatory Supplement is maintained at:

<http://wise2.ipac.caltech.edu/docs/release/allsky/expsup/index.html>

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